

1. A cement composition comprising:
a hydraulic cement;
sufficient water to form a slurry; and
an additive comprised of CMHEC having in the range of from about 0.62 to about 2.21 moles of hydroxyethyl substitution and in the range of from about 0.44 to about 0.52 degrees of carboxymethyl substitution, and a 2% by weight aqueous solution of the CMHEC has a Höppler viscosity in the range of from about 55 mPa.s to about 359 mPa.s.
2. The composition of claim 1 wherein the CMHEC has about 1.93 moles of hydroxyethyl substitution and about 0.52 degrees of carboxymethyl substitution and a 2% by weight aqueous solution of the CMHEC has a Höppler viscosity of about 55 mPa.s.
3. The composition of claim 1 wherein the CMHEC is present in the cement composition in an amount in the range of from about 0.1% to about 2.5% by weight of the hydraulic cement therein.
4. The composition of claim 1 wherein the hydraulic cement in the composition is selected from the group consisting of Portland cements, slag cements, pozzolana cements, gypsum cements, aluminous cements and alkaline cements.
5. The composition of claim 1 wherein the hydraulic cement is Portland cement.
6. The composition of claim 1 wherein the water is selected from the group consisting of fresh water and salt water.

7. The composition of claim 1 wherein the water is present in the composition in an amount in the range of from about 35% to about 55% by weight of hydraulic cement therein.

8. The composition of claim 1 wherein the composition further comprises sufficient gas therein to foam the slurry.

9. The composition of claim 8 wherein the gas is selected from the group consisting of air and nitrogen.

10. The composition of claim 8 wherein the composition further comprises a sufficient amount of a foaming and foam stabilizing surfactant mixture to facilitate the formation of and stabilize the foam.

11. The composition of claim 10 wherein the foaming and foam stabilizing surfactant mixture is comprised of an ethoxylated alcohol ether sulfate present in the mixture in an amount of about 63.3 parts by weight, cocoylamidopropyl betaine present in the mixture in an amount of about 31.7 parts by weight and cocoylamidopropyl dimethyl amine oxide present in the mixture in an amount of about 5 parts by weight.

12. The composition of claim 10 wherein the foaming and foam stabilizing surfactant mixture is present in the composition in an amount in the range of from about 0.1% to about 2.5% by volume of water therein.

13. A cement composition comprising:
- a hydraulic cement;
 - sufficient water to form a slurry;
 - an additive comprised of CMHEC having in the range of from about 0.62 to about 2.21 moles of hydroxyethyl substitution and in the range of from about 0.44 to about 0.52 degrees of carboxymethyl substitution, and a 2% by weight aqueous solution of the CMHEC has a Höppler viscosity in the range of from about 55 mPa.s to about 359 mPa.s;
 - sufficient gas to foam the slurry; and
 - a sufficient amount of a foaming and foam stabilizing surfactant mixture to facilitate the formation of and stabilize the foam.
14. The composition of claim 13 wherein the CMHEC has about 1.93 moles of hydroxyethyl substitution and about 0.52 degrees of carboxymethyl substitution and a 2% by weight aqueous solution of the CMHEC has a Höppler viscosity of about 55 mPa.s.
15. The composition of claim 13 wherein the CMHEC is present in the cement composition in an amount in the range of from about 0.1% to about 2.5% by weight of the hydraulic cement therein.
16. The composition of claim 13 wherein the hydraulic cement in the composition is selected from the group consisting of Portland cements, slag cements, pozzolana cements, gypsum cements, aluminous cements and alkaline cements.
17. The composition of claim 13 wherein the hydraulic cement is Portland cement.

18. The composition of claim 13 wherein the water is selected from the group consisting of fresh water and salt water.

19. The composition of claim 13 wherein the water is present in the composition in an amount in the range of from about 35% to about 55% by weight of hydraulic cement therein.

20. The composition of claim 13 wherein the gas is selected from the group consisting of air and nitrogen.

21. The composition of claim 13 wherein the foaming and foam stabilizing surfactant mixture is comprised of an ethoxylated alcohol ether sulfate present in the mixture in an amount of about 63.3 parts by weight, cocoamidopropyl betaine present in the mixture in an amount of about 31.7 parts by weight and cocoamidopropyl dimethyl amine oxide present in the mixture in an amount of about 5 parts by weight.

22. The composition of claim 13 wherein the foaming and foam stabilizing surfactant mixture is present in the composition in an amount in the range of from about 0.1% to about 2.5% by volume of water therein.

23. A cement composition additive comprising CMHEC having in the range of from about 0.62 to about 2.21 moles of hydroxyethyl substitution and in the range of from about 0.44 to about 0.52 degrees of carboxymethyl substitution, and a 2% by weight aqueous solution of the CMHEC has a Höppler viscosity in the range of from about 55 mPa.s to about 359 mPa.s.

24. The additive of claim 23 wherein the CMHEC has about 1.93 moles of hydroxyethylcellulose and about 0.52 degrees of carboxymethyl substitution and a 2% by weight aqueous solution of the CMHEC has a Höppler viscosity of about 55 mPa.s.